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The Employment of Women in the European Union

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WORKING PAPERS

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Gudrun Biffl

297/2007

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The Employment of Women in the European Union

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Abstract

The employment of women has been increasing rapidly in Europe since the 1960s. This is the outcome of fundamental transformations of the economic structure in the wake of technological change and increasing internationalisation of production on the one hand, and changes in the social sphere on the other. Above all, the increasing educational attainment of women is a key factor for the improved employment and earnings opportunities of women.

With economic, social, educational and technological developments, women have been moving out of the household economy into the market economy. The market has taken over an increasing proportion of household production, be it the production of consumer goods (food, clothing) or the provision of services like care work for children, sick or the elderly. Overall, this has resulted in greater efficiency and added to economic growth – even after allowing for the reduction of the household economy.

As more and more European countries are moving towards the technological production frontier, work in the agricultural sector and low wage and low productivity jobs in manufacturing is declining. This is also true of the hours spent in household production. In all these tasks women tended to be the main source of labour, not always included in statistics, as informal and unpaid work is quite common in these tasks. Also the output of the informal and household sector production tends not to be captured in GDP thereby underestimating total output and real income.

The increasing employment of women is not only a result of economic restructuring, in particular the increasing importance of the market economy for the production of goods and services, but also a consequence of changing family structures (decline of fertility, rise in the number of single households), changing expectations of women, changing wage determination mechanisms (equal opportunities legislation) and increasing urbanisation. The geographic mobility and the physical separation of family members from the household in different phases of personal development, diminish informal exchange and assistance between generations – parents and children – such that the state, in many countries, is

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[♥] This paper has been presented in Yogyakarta, University Gadjah Mada, Indonesia, June 15, 2007. I thank the department of economics for the lively discussion and valuable comments.

drawn to take over the role of mediator through the provision of services (childcare, nursing homes) and/or benefits (transfer payments) in order to secure the welfare of the needy members of society. Many of the services which have been outsourced from the household sector to the market sector tend to remain almost exclusively a female employment domain. Thus, the areas of production that constitute the domain of female work in traditional societies remain the same in the developed industrial societies; only the degree of marketisation differs. The extent to which domestic work is outsourced depends upon the system of social organisation (welfare model) in Europe. Thus, it is a different set of taxes, transfer payments and public services in the various models which impacts on the relative efficiency and direct and indirect costs of goods and services which can be produced in the household or the market sector. Different institutional settings impact on the opportunity cost of domestic work and/or the shadow price of the domestic good or service, resulting in a divergence of the employment rate of women between the various models in the European Union.

Keywords

Employment rates, models of social organisation, marketisation of household production, time use surveys, gender segregation.

Introduction[•]

Globalisation, technological change, increasing educational attainment levels, changing behaviour patterns as well as coordination of a wide range of policies within the EU, e.g., the Maastricht Treaty and the Lisbon Agenda, have an impact on the occupational and industrial structure of employment and the division of work between the household and market sector by gender. As a result of the interaction of this complex set of forces, the employment patterns of men and women as well as the degree of integration into the labour market by gender are slowly converging within the EU. Today (2005) the difference in the employment rate of women among the countries in Europe (EU-15) has a spread of some 20 percentage points compared to some 37 percentage points in the mid 1960s. The average difference between the employment rate of men and women in the EU-15 today is 15 percentage points, compared to some 45 percentage points in the mid 1960s (Chart 1).

With economic, social, educational and technological developments, women have been moving out of the household economy into the market economy. The market has taken over an increasing proportion of household production, be it the production of consumer goods (food, clothing) or the provision of services like care work for children, sick or the elderly. The Nordic and Anglo-Saxon countries have had the fastest transfer of household production to

[•] The author thanks Andreas Steinmayr for his competent research assistance.

the labour market and are therefore at the top end of the employment rate of women in Europe today, closely followed by the United Kingdom. The Southern European countries on the other hand have been comparatively slow in this transition process, together with a slow process of industrial restructuring and technological change. Outsourcing of services from domestic work to the market has contributed to the large rise in employment in the services sector over time (Chart 2).

Chart 1:

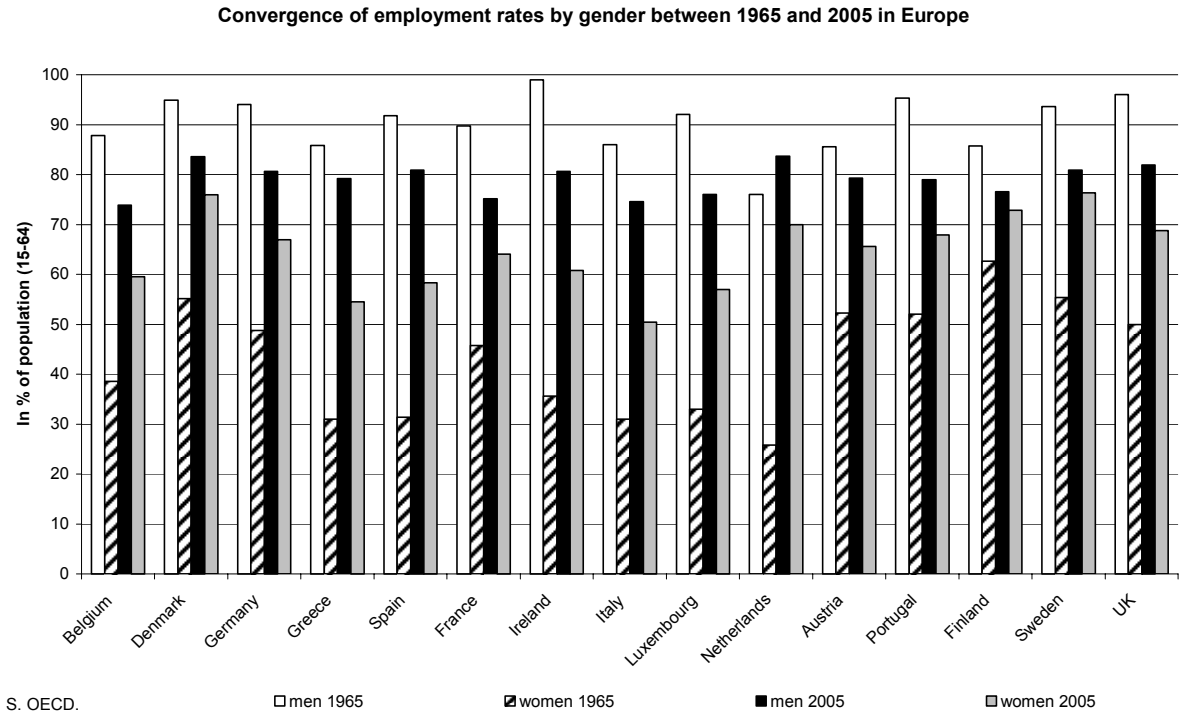
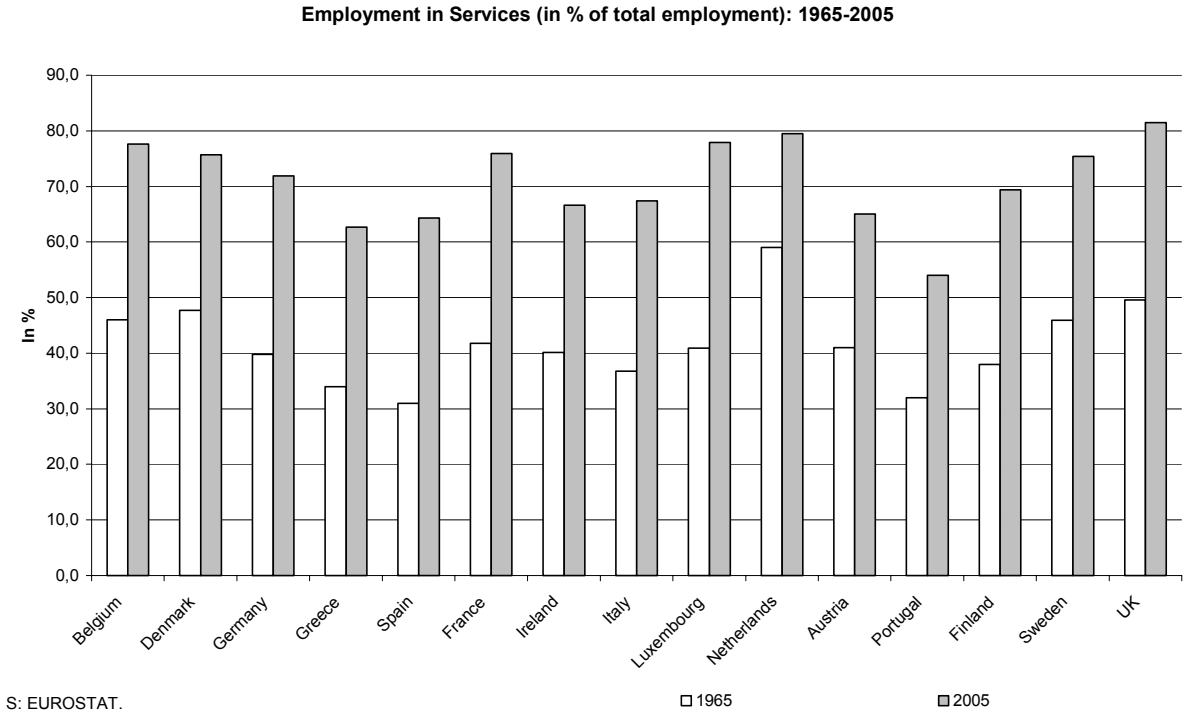


Chart 2:



Thus, the spread in the employment rate of men and women over time and between countries reflects differences in the development of labour supply and demand by skills, industries and gender as well as institutional arrangements.

The employment rate of women exhibits a positive trend in the long-run in every country in Europe.[1] The take-off point for an increasing participation of women in market work differs by country as well as the rate of growth over time. The different development speeds can be associated with country-specific models of social organisation. The EU distinguishes between four different basic models of social organisation (welfare models) in Europe (*European Commission,* 2001)[2]:

1. The Anglo-Saxon Model (IE, UK)
2. The Continental European Model (AT, BE, DE, FR, LU, NL)
3. The Scandinavian Model (DK, FI, SE)
4. The Southern European Model (ES, GR, IT, PT)[3].

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[1] Exceptions are countries of the former Eastern Block which faced significant declines of female activity rates in the wake of transition from a command economy to a market economy. After consolidation of economic and social systems, activity and employment rates increased again in the course of the 1990s and early years of 2000.

[2] The EC bases its distinction on research by *Esping-Anderson* (1990), and *Scharpf* (2000).

[3] AT ... Austria, BE ... Belgium, DE ... Germany, DK ... Denmark, ES ... Spain, FI ... Finland, FR ... France, GR ... Greece, IE ... Ireland, IT ... Italy, LU ... Luxembourg, NL ... The Netherlands, PT ... Portugal, SE ... Sweden, UK ... United Kingdom.

These models differ by the different roles and weights assigned to the three main pillars of socio-economic development and wellbeing – the (labour) market, the state, and the family. Countries which relegate a large portion of work, in particular social services, to the household sector, by tax incentives or transfer payments, have a lower employment rate of women than countries in which the state or the private sector are the major suppliers of these goods and services. The new EU-Member States (NMS) are very heterogeneous and do not fit into either model.

Policy co-ordination within the EU contributes to a certain convergence of the models and their outcomes, the basic structural differences remain, however, providing the main explanatory power for differences in the employment rates of women in EU-MS.

The four models of social organisation in Europe and resulting differences in labour market outcomes

The differences in labour market outcomes by model of social organisation indicate that the interaction between the three pillars of socio-economic systems, the market, the family/household and the state, is organised differently in the various models with important implications for socio-economic development (education, fertility) and economic growth.

The Anglo-Saxon social model tends to be referred to as market led (liberal), the Scandinavian Model as social democratic and the continental European as corporatist (conservative)[4], while the Southern European model of social organisation is not as homogeneous, combining elements of the three models with varying weights depending on the country concerned. The functional mechanism of decision-making differs as a result of a different set of institutions and the outcome of the decision process may differ as a result of different motivational forces guiding institutions and socio-economic actors. The models differ in their priorities of protection against risks, their composition of social expenditure, their source of funding and the organisation of the provision of personal and social services.

The Anglo-Saxon (male breadwinner) Model, exemplified by the UK and Ireland, is basically run by the public sector and funded out of general revenue. Access to health services is universal; access to welfare is subject to means testing (residual welfare model). This basic scheme of social protection is complemented by private insurance (health and pension schemes), i.e., a system which allows those prepared to pay for it, to enjoy benefits above the minimum provided for by the state (*Biffl,* 1999/2004), *European Commission,* 2001, *OECD,* 1998A, 1998B, *OECD* 1999A, 1999B).

In contrast, the continental European (Bismarck) Model is centred on a social insurance system, comprising health, unemployment and retirement insurance, which is funded out of contributions by employers and employees. This basic model is complemented by a system of

[4] For more details about the differentiation of social models see *Soskice* (1999), *Hollingsworth – Boyer* (1997), *Aoki* (1995).

tax benefits and/or transfer payments to families, based on the number and age of children. The family allowance scheme is paid out of a wage and income tax fund, thus keeping family policy separate from a market oriented wage system. Only a small proportion of the population is not covered by the social insurance scheme (Table 1).

The Scandinavian model focuses on individual social rights and obligations. The system of social protection is employment centred. Work is not only the source of income but also the means through which the social dividend is distributed. Unemployment insurance is organised by the unions, which explains the high degree of unionisation in Sweden (*Gustafsson,* 1996). Thus, integration into the labour market is vital for the wellbeing of the individuals. Work related income and services are complemented by public sector services, like child and health care, which can be accessed by every resident. The universal character of welfare services reduces the need for special, means tested integration measures.

Table 1: Typology of European Welfare Systems

	Anglo-Saxon – Beveridge Model	Continental European – Bismarck Model	Scandinavian Model
Countries	IE, UK	AT, BE, DE, FR, NL, LU	DK, NO, SE, FI
Basic principles	Welfare (means tested; services/benefits without prior contributions)	Benefits relative to the former income from work	Benefits relative to the former income from work, universal social services
Target groups	Unemployed, sick, disabled, older persons, jobless parents	Unemployed, sick, disabled, older persons, families with children	Unemployed, sick, disabled, older persons, families with children
Functional profile	Benefits to cover subsistence, education and health system	Benefits to cover subsistence, education, health system, income related social insurance	Benefits to cover subsistence, education, health system, income related social insurance, universal social services
Organisational framework	State provision (including unemployment benefits)	Public sector	Public sector and unions
Funding	In the main taxes	In the main social security contributions	In the main taxes

Source: *Scharpf* (2000), http://www.uni-bamberg.de/sowi/europastudien/dokumente/es_sozialstaat.pdf

In the Southern European (family centred) countries, social services are organised somewhat differently. Health services are universally accessible, while income protection schemes tend to follow the Continental European insurance model. In addition, the family plays an important role as a provider of care and income support, as unemployment insurance and active labour market policies are underdeveloped compared to the other European models. Family benefits/transfer payments to the household are small, comparable to the UK and in stark contrast to the corporate model. The informal sector plays an above average role and complements formal market income and/or market goods and services for household consumption.

A different set of taxes, transfer payments and public services in the various welfare models results in a divergence of incentives to the private sector and/or the household for the

provision of social services. Consequently, the degree of integration of the working age population into the labour force differs, together with the price and quality of social services.

All models except the Scandinavian share the notion of a male breadwinner, which features in the system of wages, taxes and transfer payments. The notion of the male breadwinner is at the root of wage differentiation by gender, as men are accorded a 'family wage', which is to sustain the whole family[5]. With globalisation and the removal of access barriers to jobs and goods markets, this practice of differentiating wages by gender from a family policy perspective, is coming under attack due to the overriding economic rationale of bringing productivity and wages in line.

In spite of these changing strategies and the increasing importance of economic rationalities, men continue to be at the top of the job and wage scale, not least because women are doing the major part of household work, thus leaving little time and flexibility for market work. Employment by occupation and working hours is highly gendered as a result. With the onset of feminism and equal opportunities legislation in the course of the 1970s, which took the form of gender mainstreaming in the EU-policy context in the 1990s, differentiation of wage rates by gender is no longer allowed. As a result, women tend to be granted a man's wage if they are doing 'men's work'; in 'female' jobs, however, the determination of the 'proper' wage remains a topic of debate.

Globalisation is a major economic factor limiting the usage of wage setting (wage bargaining) to address social and family policy issues. Additional factors are equal opportunities and thus equity considerations which call for different instruments to ensure the wellbeing of families and to combat social exclusion and poverty. In this vain, a system of family and child allowances has been implemented, which is funded out of taxes. The Continental European model has a particularly generous family allowance system[6]. Since family allowances are paid out of a tax fund, wages may be kept below a 'family wage' while ensuring an adequate living standard of single parents and families with many children.

In a quest to promote equal opportunities by gender, the tax system was reformed in EU countries, by moving away from a system of joint (husband and wife) income taxation to one of individual taxation[7]. This legislative reform was a major driving force for the outsourcing of domestic work to the market sector. It promoted the employment of women as it reduced the marginal income tax rate on the earnings of the wife. Depending on the provision of child and other care services by the market and/or state, women entered the labour market as full- or part-timers (*de Villota – Ferrari,* 2002).

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[5] *Gill* (1990) points out that 'the formulation of gender specific needs laid the foundation for the formal system of discrimination of pay on the basis of sex'.

[6] The latter explains why families with children are better off in continental Europe than in the UK.

[7] The Scandinavian countries were first (late 1960s) followed by Austria in the early 1970s. In the UK individual taxation was introduced in 1989, i.e., much later than in the Continental European countries. For details see *Gustafsson* (1996).

It was the introduction of individual taxation in Scandinavia towards the end of the 1960s, which sparked off the development of the most comprehensive state welfare system in Europe, in which the public sector has become the main provider of social services. A tax system based on individual taxation with high marginal tax rates provides the incentive for every family member to engage in market work. Social services are organised by the state/market rather than the family. Thus, the state welfare system opened up formal sector employment opportunities for women, allowing female employment rates to rise to male levels. A solidaristic wage policy reduced the wage gap between men and women to one of the lowest in Europe in spite of a pronounced gender segmentation of work – men are predominantly working in private industries and women cluster in care-oriented public services[8] (Chart 8).

In contrast, in the Continental European model, a complex system of family allowances (tax rebates for single earner households and child care benefits) together with generous transfer payments to households (benefits for the disabled and (older) persons in need of care), promotes the provision of personal services by households rather than the market. While some continental European countries have introduced a system of individual taxation, it cannot completely offset the incentive provided by tax benefits and transfers for service provision in the household. As a result, employment rates of women in the Continental European model are lower than in the Scandinavian model, particularly if calculated on the basis of full-time equivalents.

The chances of women to pursue life-time careers similar to men without having to give up motherhood depend on the system of social organisation. France, for example, has a long tradition of providing comprehensive full-day public childcare and schools. Thus, women are empowered to pursue life-time careers while the reproduction rate of fertility is preserved (as in the Scandinavian state welfare model). In contrast, German-speaking and Southern European countries do not provide child care as a legal entitlement, and nor are day-schools the rule. This limits the opportunity of women with children to pursue careers similar to men. Opening hours of schools introduce a certain rigidity of working hours of women; they act as segmentation devices for female employment.

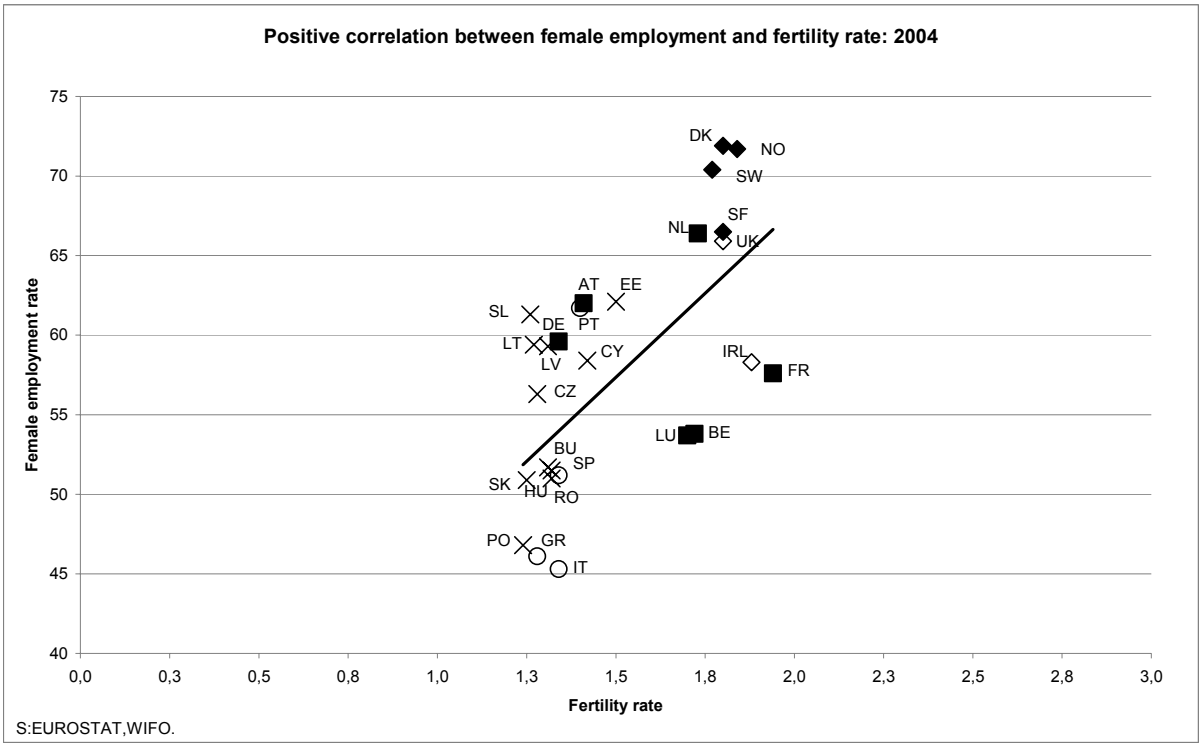
The differences in the organisation and funding of child care do not only have an impact on the degree of integration of women into the labour market but also on the fertility rate. Countries that provide ample access to (heavily subsidised) child care facilities provided by the state or private institutions tend to have a higher fertility rate than countries which tend to relegate child care to the household. As a consequence, the Nordic countries take the lead in terms of the fertility rate[9] with an average of 1.9 children per woman. A similarly high rate

[8] Research on gender segregation of work demonstrates that high levels of occupational segregation of work exist in all modern industrial societies, also in Scandinavia. There is considerable consistency across countries in the extent to which women are concentrated in certain major occupational groups (*Anker*, 1998).

[9] Fertility rate is defined as the average number of live births to a woman in her reproductive years.

can be found in France. All the other Central and Southern European countries with less comprehensive systems of full-day public child care have lower fertility rates (on average 1.3). The Anglo-Saxon countries (UK and Ireland) have also comparatively high fertility rates (1.8) as care services tend to be outsourced. In addition to public child care, a comprehensive school system, which offers full-day schooling, does not only set human resources free in the household sector but contributes to the creation of professional jobs. The same holds for the provision of care for the elderly (nursing homes or flexible mobile care in households organised by NGOs or communities). The organisation of these types of social services allows a healthy balance of work and family life for women and men in society without jeopardising the welfare of individuals or groups of persons (Chart 3).

Chart 3:



Thus, the system of socio-economic organisation does not only influence the employment rate of men and women, but also the division of work between market and household work, the mix of part-time and full-time work, occupational segmentation, and lifetime earnings. This can be seen in Table 2. The degree of integration of the population of working age into gainful employment declines as one moves from the North to the South of Europe, together with the proportion of women in employment and the share of the public sector in total employment.

An important consequence of the different organisation of 'work', i.e., the division of labour between the household and market sector, through a complex system of taxes and benefits are differing degrees of poverty and income inequality. They are lowest in the Nordic countries, in the middle in the Continental European countries and highest in Southern Europe (*Mejer – Linden,* 2000).

The Anglo-Saxon model tends to differ somewhat in that it has a comparatively high degree of integration of the population into the labour market. It is, however, the private sector together with non-profit institutions that plays a dominant role in the provision of personal services with the consequence of a relatively high degree of poverty of certain groups of people, in particular single mothers.

Table 2: Indicators of the European Welfare Systems

		Scandinavian Model	Continental European Model	Anglo-Saxon Model	Southern European Model
Total employment (In % of population 15-64)	High	X		X (UK)	
	Middle		X	X (IE)	
	Low				X
Female employment (In % of total employment)	High	X		X (UK)	
	Middle		X		
	Low			X (IE)	X
Employment in the public sector (In % of total employment)	High	X			X
	Middle		X		
	Low			X	
Social expenditures in % of GDP	High	X			
	Middle		X	X (UK)	
	Low			X (IE)	X
Poverty	High			X	X
	Middle		X		
	Low	X			
Income inequality	High			X	X
	Middle		X		
	Low	X			

Source: *Esping-Andersen et al.* (2001), Austrian Institute of Economic Research (WIFO), *Atkinson et al.* (2001).

Many of the services (as well as production of consumer goods) which have been outsourced from the household sector to the market sector tend to remain almost exclusively a female employment domain. Thus, the production spheres, which constitute the female domain of work in traditional societies, remain the same in the developed industrial societies. The degree of marketisation differs, however.

Different degrees of marketisation of household production as explanatory factors for the difference in employment rates of women across the EU

According to the marketisation hypothesis, those countries with a higher employment rate of women produce less goods and services through household production and more through

the market. This difference does not only show up in a higher employment rate of women but also in a larger proportion of services in total employment (Chart 2), in a higher educational attainment level of women (Chart 4), and higher productivity, measured in terms of GDP per capita (Chart 6).

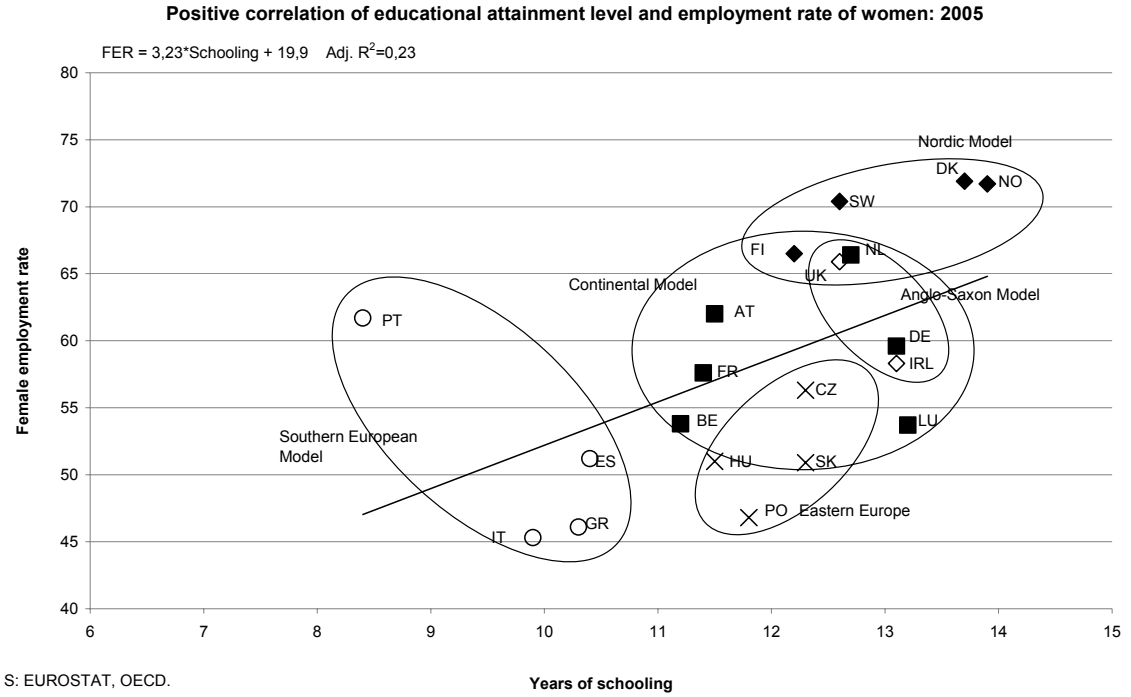
Time use surveys show that women who do not work in the market sector or work reduced hours in the market, work relatively long hours in the household sector, thereby producing goods and services for consumption of household members (*EC,* 2003, *Aliaga,* 2006, *Bittman et al.,* 1999). Overall, the total hours worked by women, i.e., the sum of household and market work, do not differ much relative to total hours worked by men in the Nordic (FI, SW, NO) and Anglo-Saxon (UK) countries. In the Central European countries, however, women tend to work slightly longer hours per average work-week (FR, BE, DE) than men, while women in the Southern (IT, ES) and Central and Eastern European countries (LV, LT, HU, PL, SL) work clearly longer total hours than men (*EC,* 2006), (Chart 5). The latter may be an indication for the important role of informal sector work, particularly for women, in Eastern and Southern EU-MS[10].

Marketisation of household production does not only show up in a higher market employment rate of women but has also important implications for the production possibilities in the market sector. There is a positive relationship between the economic development level of an economy, measured in terms of GDP per head, and the employment rate of women (Chart 6). This may be explained by the fact that the more complex the economy, the greater the need for diverse and highly specialised skills. In this environment, the market offers greater opportunities for the division of labour, the application of a different technology and the achievement of economies of scale than the household and informal sector (*Bassanini et al.,* 2001, *Behrens,* 2000/2003).

The consequence of outsourcing of domestic work to the market is a boost to the demand for low skilled labour. In contrast, the preservation of work in the household sector tends to lock in any type of skill levels in household work. The latter may contribute to skill shortages on the labour market and thereby restrict the economic growth potential. As *Freeman – Schettkat* (2001) put it: "As long as some skilled and educated persons produce in the household, rather than buying in the market, the demand for low skill labour will be less in the economy with greater household production."

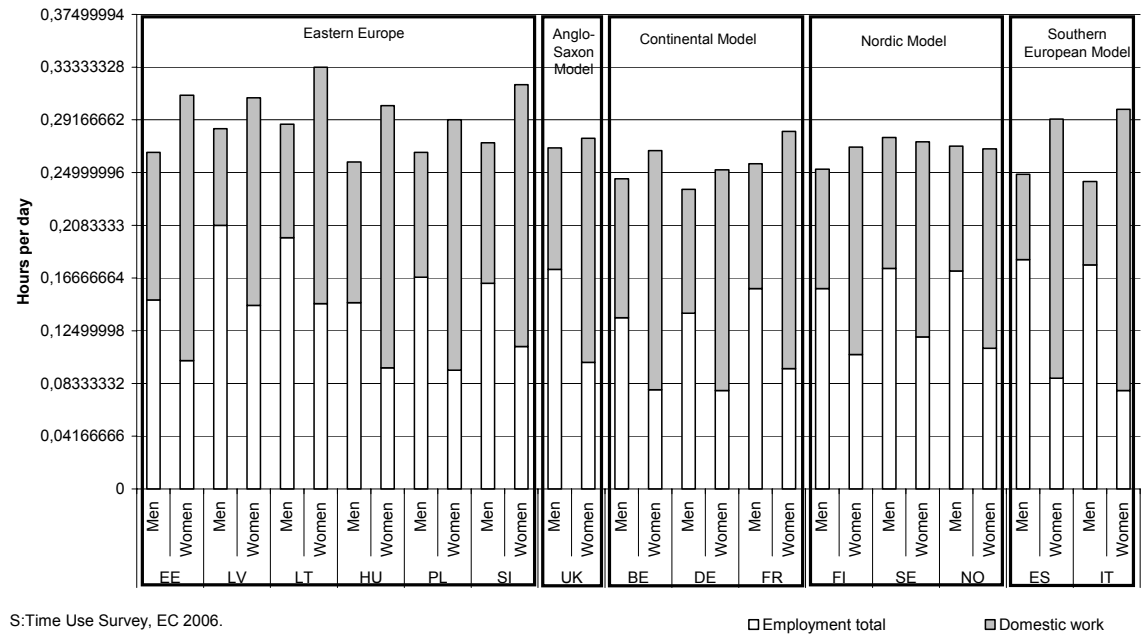
[10] In the CEECs women's formal employment has fallen significantly with the onset of socio-economic-political reform towards market economies, with a drop of 40% in Hungary between 1985 and 1997 (*UNIFEM,* 2000). The decline in formal employment was accompanied by a rise in informal work to make ends meet.

Chart 4:



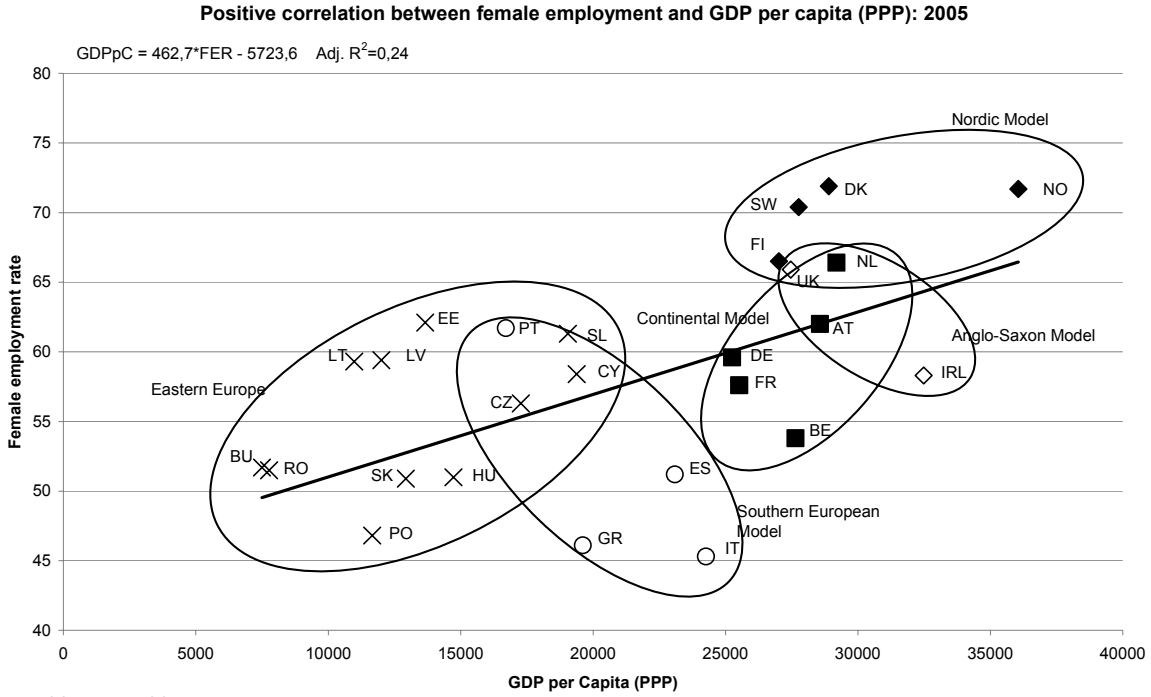
S: EUROSTAT, OECD.

Chart 5:



S:Time Use Survey, EC 2006.

Chart 6:



S: EUROSTAT, AMECO

Thus outsourcing of household work increases employment opportunities in the market for persons of any skill level due to the greater potential of the market for the division of labour into various tasks and skill requirements. The output is produced more efficiently than in the household, in particular in those tasks which lend themselves to economies of scale and technical progress. This is to say that the market has the capacity to produce goods and services, which are substitutes for domestic work, more efficiently than the modern, core family, small scale households. Time use surveys in Europe show that in countries where women work lower hours in domestic work in favour of market work, they outsource above all laundry and ironing, cooking and dish washing, cleaning, child care for children over 7 (*EC*, 2004).

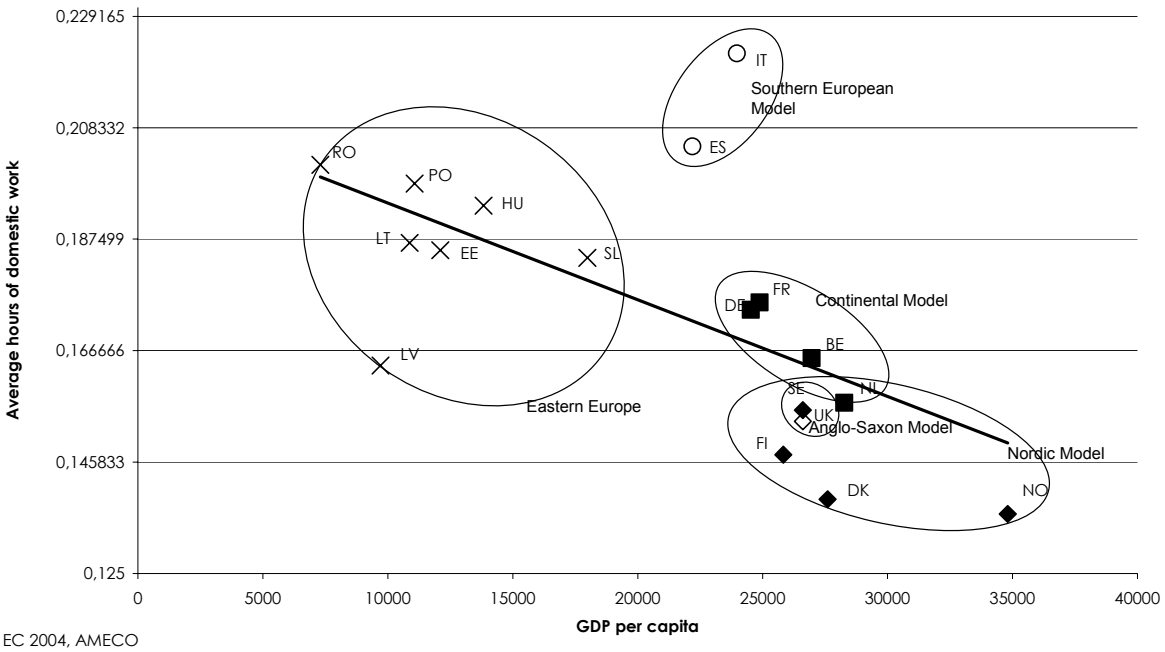
Marketisation of household production contributes to a more efficient and equitable allocation of resources. The latter may raise the productive potential of the society and promote economic growth and welfare[11]. The question of the causality is not clear, however. Is it the need for highly skilled labour resources in rapidly developing industrial and post-industrial societies that pull women out of the household sector (demand pull factors) or are individualisation processes (supply push factors), in particular the autonomous trend towards

[11] Higher welfare levels may be associated with a low social gradient (small differences in income, education, housing standards), longevity and the preservation of a reproduction rate of fertility. The Nordic countries seem to do best on all these accounts and the Southern and CEECs worst.

higher education or changing social and cultural norms and values (featuring in equal opportunities legislations) the major driving forces for a new organisation and division of labour?

Chart 7:

Negative correlation of GDP per capita and working hours of women in domestic work (2004)



S: EC 2004, AMECO

For domestic work to be outsourced the market must have a productivity advantage over household production, i.e., the value of household production must be lower than the substitute market good. Time use surveys show that there is a clear negative correlation between GDP per capita and average working hours of women in domestic work. This negative relationship may partly be the result of an underestimation of the value of household production in GDP. Chart 7 indicates that the new EU-MS in Central and Eastern Europe have the lowest GDP per capita while women spend particularly long hours in household work. In the EU-15, however, there is relatively little difference between GDP per capita in the various countries, while the dispersion of hours spent in domestic work by women is relatively large. The differences in domestic work can be ordered along the models of social organisation, with the Southern European countries being at one end of the spectrum and the Nordic countries at the opposite end. The Nordic countries fare clearly better in terms of GDP per capita, though.

The incentive to outsource domestic work to the market is affected by the earnings opportunities on the labour market on the one hand and the cost of market substitutes for domestic goods and services on the other. The relative prices are affected by the "tax

wedge" between the household service (no taxes on household production in combination with transfer payments for non-market work – family benefits) and the market good (net earnings from market work in combination with market taxation of goods and services). The higher family transfer payments (particularly when combined with single earner tax rebates and/or combined family income taxation), the lower the incentive for women to work on the labour market. Also the dispersion of wages by skill level has an impact on outsourcing work from the household sector, i.e., the higher the wage dispersion the greater the incentive by the better skilled persons to transfer household work to the market and the lower for low skilled persons.

Thus, the compressed wage differentials by skills in the Nordic countries in combination with high marginal tax rates and individual taxation provides an incentive to maximise market work on the part of all family members (supply side). As to the price of substitute domestic goods, the universal access to social services at comparatively low cost (highest 'productive' government expenditures in the EU) in combination with low non-employment transfers provides the incentive to 'buy' substitutes for household goods and services on the market. Thus, the combination of institutional arrangements which act on the demand and supply side of the providers/consumers of social services promotes outsourcing of domestics work to the market sector. The market orientation of labour supply has the additional effect that it is a powerful incentive device to invest in one's human capital, i.e., education and training, to maximise individual and social returns. The social return to higher education is particularly pronounced in a society and economy which is increasingly based on knowledge work.

In contrast, high income taxation, comparatively low skill differentials in wages and high non-employment transfers to households (family benefits) promote the production of goods and services in the household sector – thereby reducing the labour supply of skilled workers and reducing potential economic growth. In contrast, the Anglo-Saxon model (UK) promotes outsourcing of domestic work by low wage taxation and large wage differentials by skills on the one hand and limited (means tested) transfer payments to households, i.e., in a similar manner as the USA.

Dhont – Heylen (2006) argue that the Nordic countries have performed best in Europe in terms of per capita economic growth in the period 1995-2004, (as well as or better than the US economy) due to marketisation of domestic work, which allows a more efficient allocation of resources.

Interaction between market and household labour supply

The household (family) is the setting, in which human labour resources are being recharged through the consumption of goods and services bought from the market (on the basis of market income) or produced by the household for one's own consumption (on the basis of

unpaid labour)[12]. It provides labour-resources for market work – productivity increases in household production set labour resources free, in particular female labour. Apart from that, it is a source of population growth and hence work force growth through procreation and provision of early education and care for children. Children are in that sense not just a consumption good, i.e., satisfy a private need, but also an investment good, i.e., represent the basic human capital input for future production of goods and services.

The labour supply responds to changes in the economy and in the institutional setting. Employment of married women depends upon the extent to which public and private sector institutions take over (care) work from the family. Generous transfer payments and public services reduce the dependence upon the family for care work. At the same time they set labour resources free, to be employed in the labour market, often for similar tasks as in the household sector. Wage setting mechanisms and the extent to which they prevent gender segmentation, are of particular importance in the efficient allocation of labour between household and market production. There are mass-consumption areas in the public good sector, e.g., education, and in the welfare state, e.g., health services, unemployment protection, retirement provision, in which cost-efficient provision of services is more easily obtained by those working in the market. Economies of scale are possible and technical infrastructure (in particular new technology) can be put into place to ensure productivity increases which are less likely in the small-scale household/core family of industrial and post-industrial societies. If the services are not provided by the public sector, private agents may step in. However, there appears to be no viable alternative to the state in the provision of services of mass-consumption like education, health and to some extent care work. Equity as well as efficiency criteria are to be taken into account in public as well as private sector provision.

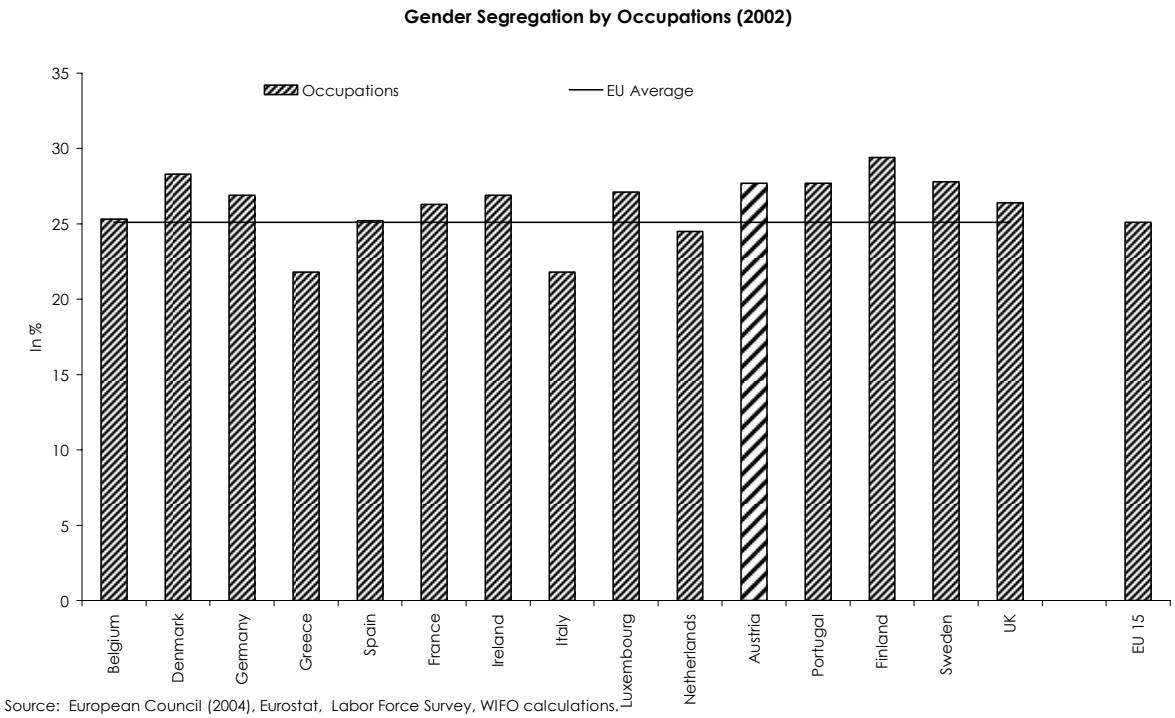
Thus, the increasing employment rate of women has to be seen in the light of changing family structures (decline of fertility, rise in the number of single households), changing expectations of women, changing wage determination mechanisms (equal opportunities legislation), urbanisation and a change in the division of work between the household and market sector. The geographic mobility and the physical separation of family members from the household in different phases of personal development, diminish informal exchange and assistance between generations – parents and children – such that the state, in many countries, is drawn to take over the role of mediator through the provision of services (childcare, nursing homes) and/or benefits (transfer payments) in order to secure the welfare of the needy members of society. Many of the services which have been outsourced from the household sector to the market sector since the Second World War remain almost exclusively a female employment domain. This development is reminiscent of the transfer of the production of consumer goods (textiles, clothing, food, etc.) from the household to the

[12] The household/family is not the only place of the daily renewal of human resources; intergenerational renewal of human resources is, however, under present social conventions only conceivable in a family context.

market in the wake of industrialisation towards the end of the 19th century. The production spheres, which constitute the female domain of work in traditional societies, continue to do so in the developed industrial societies.

Countries with above average female employment rates have outsourced household services to the market to a larger extent than countries with a low degree of integration of women into the formal market economy. This development results in an above average concentration of female labour in so-called 'female' occupations, e.g., the case of Sweden (Chart 8).

Chart 8:



Source: European Council (2004), Eurostat, Labor Force Survey, WIFO calculations.

Chart 8 shows the gender segregation by occupations (ISCO 88 classification)[13] in the EU-15. For a better understanding of the Chart: the sum of the gender differences of employment shares in the various occupations is taken as a proportion of total employment. Thus, e.g., in the case of Austria, the coefficient of occupational concentration (with 27.7% of total employment) exceeds the EU-15 average of 25.1%. This is to say that gender segmentation by occupation is more pronounced in Austria than the EU, only surpassed by the Nordic countries, where household production has been transferred to the market more than elsewhere, providing more jobs for women than men.

[13] International Standard Classification of Occupations (88) established by the International Labor Organization (ILO).

If one looks at the occupational composition of total labour (market plus household sector), one observes greater similarity in the degree of gender segmentation of work between countries and within countries over time than in the case of market work only. Institutional factors, and in particular the basic institutional model of the welfare state, are responsible for major cross-country differences in employment structures by economic sector, occupation and gender. Thus the employment structure of a country will reflect whether the welfare model is based on the predominance of the male breadwinner or on a more equal balance of male and female breadwinners.

These different concepts have implications for market labour supply and demand – their level as well as their composition. The lack of attention to the role of the household sector in the production of goods and services for the well-being of a society and for the assurance of a steady supply of skilled and healthy labour for market work accounts for the gap in neo-classical theory in explaining why, in the course of economic development, the state has embarked upon the establishment of a new set of institutions, the welfare state[14].

Thus, international comparisons of labour market structures by economic sector, gender and skills as well as comparisons of one country over time, along a socio-economic development path, are inconclusive when it comes to the evaluation of the development of the well-being of a society and its overall efficiency in the production of goods and services, which are necessary for international competitiveness.

Economic theory and research have generally been concerned with the analysis of market processes within a given legal and institutional social system. The role of the household sector in the provision of a constant flow of labour services, e.g., through childrearing, basic education, nutrition, care, etc., comes to the fore only when the public sector is required to take over these functions in response to society's call to increase and streamline the human capital stock. The 'technology' of the provision of services differs between the market and household sector and so may their productivity and efficiency. The inclusion of the household production sector in a circular flow model of production and consumption may open up alternative pathways for the redesign of welfare systems. In a reform of the welfare system it may be necessary to go beyond the breadwinner model if the objective is to ensure social stability and to re-establish a sense of security in an individualised society.

The standard labour supply model, which only takes labour supply for market work into account, cannot capture the importance of the institutional setting for the labour supply. It can be taken from Table 3:(1) that the level of the employment rate of women can be fairly well 'explained' solely on the basis of belonging to a set of countries within a particular model of social organisation, i.e., the institutional setting of a country. The latter does not only have an impact on relative wages and thus the price of leisure by skills that drive individual labour supply decisions, but also the cost of market goods and services which are substitutes of household production.

[14] The role of Pigou's conception of welfare for the framing of neo-classical thought has to be borne in mind and followed up in further critical research on this topic.

The role of education is significant for the explanation of the employment rate of women, as can be seen by model (2). If one adds the degree of marketisation of household work, measured by the share of services in total employment, into the regression function (3), about two thirds of the variance in employment rates of women can be explained. It is particularly notable that the impact of education is fairly robust in model (2) and (3), indicating that with an increase of schooling of 1 year the employment rate of women may be raised on average by 3 to 4 percentage points.

Apart from economic considerations, social change, in particular increasing individualisation of society implies a growing responsibility on the part of women for their own livelihood. But increasing employment and income uncertainties of men also contribute to the need for women to increasingly take up market work in order to stabilise the income flow of families over the life cycle. This appears to be of particular significance in the case of CEECs, where transition from command economies to market economies was accompanied by a widening of income inequalities forcing women and to some extent also men to take up informal work to make ends meet. Chart 9 indicates that there is a statistically significant and robust negative relationship between the employment rate of women and the share of the informal sector in GDP. The significant output declines and job losses in the formal sector, in the main in manufacturing, mining and agricultures, after the demise of the command economies and the slow progress in establishing western European style welfare systems, may have turned recourse to informal work into a survival strategy for many (*Biffl,* 1996, 2002).

Table 3: Female employment rate as a function of the model of social organisation, of years of education of women and of outsourcing domestic work 2005

Dependent Variable	Female Employment Rate (1)		Female Employment Rate (2)		Female Employment Rate (3)	
	Coeff.	t-Stat.	Coeff.	t-Stat.	Coeff.	t-Stat.
Constant			19.90	*1.33*	–24.73	*–1.63*
Services in total employment in %					0.44	*2.46*
Average years of Schooling (women)			3.23	*2.59*	4.30	*3.44*
Dummy_anglo	62.10	*4.74*				
Dummy_cont	58.85	*2.73*				
Dummy_scand	70.13	*3.35*				
Dummy_south	51.08	*3.35*				
Dummy_east	53.53	*1.93*				
Adj. R^2	0.42		0.23		0.61	
DW-Statistics	1.97		1.66		1.43	
Observations	28		20		19	

Source: EUROSTAT. -
Dummy_anglo (average employment rate of group of countries) 1 for Anglo-Saxon country – 0 otherwise
Dummy_contin (average employment rate of group of countries) 1 for continental European country – 0 otherwise
Dummy_scand (average employment rate of group of countries) 1 for Scandinavian country – 0 otherwise
Dummy_south (average employment rate of group of countries) 1 for southern European country – 0 otherwise
Dummy_east (average employment rate of group of countries) 1 for Eastern European country (NMS) – 0 otherwise

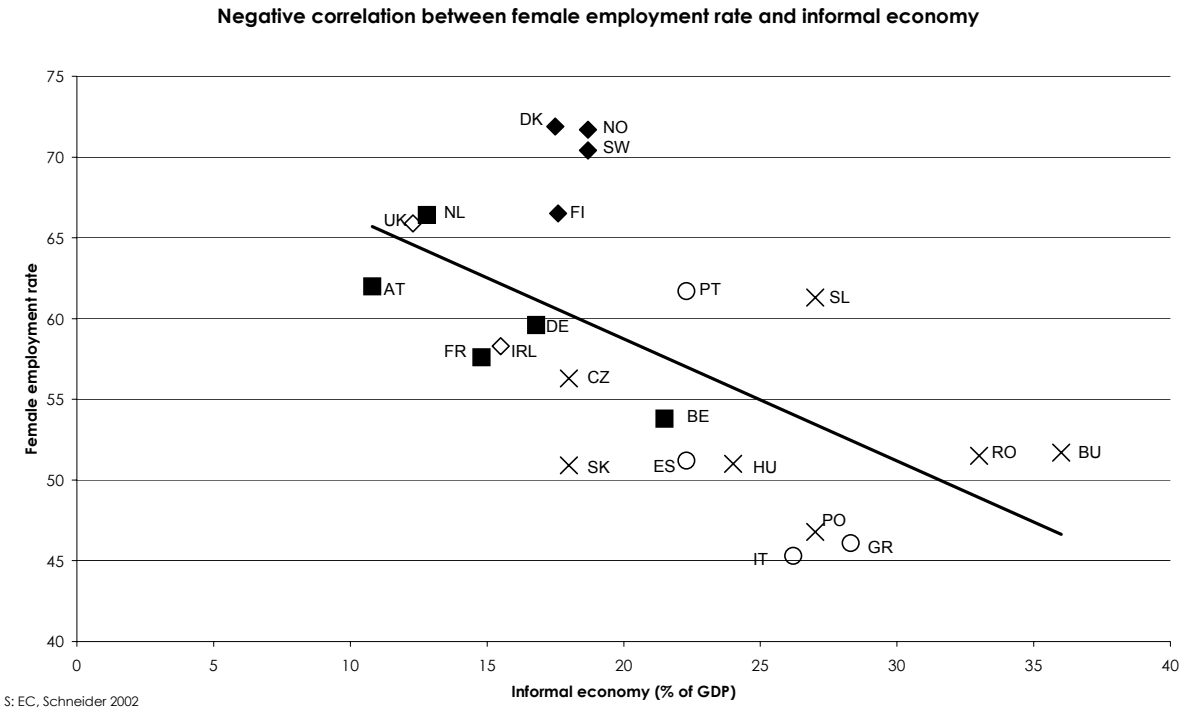
The correlation between GDP per capita (PPP) and the employment rate of women is a fairly robust relationship as can be seen in table 4 (1, 2). Also years of schooling of women (2) are an important explanatory variable for the economic wellbeing of a society, measured in terms of GDP per capita (PPP).

Table 4: GDP per capita in PPP as a function of female employment rate and years of schooling of women 2005

Dep. Variable	GDP per capita (1)		GDP per capita (2)	
	Coeff.	t-Stat.	Coeff.	t-Stat.
Constant	–5723.62	–0.65	–11259.38	–1.02
Female Employment Rate	462.65	3.07	450.8	2.6
Average years of Schooling (women)			747.53	0.68
Adj. R^2	0.24		0.39	
DW-Statistics	1.18		1.61	
Observations	27		19	

Source: WIFO.

Chart 9:



S: EC, Schneider 2002

Conclusions

The organisation of work is under constant flux in Europe. The conceptual division of paid work in the market and unpaid work in the household, which we have come to accept since the industrial revolution, and which has contributed to the exclusion of the household sector from economic analysis, is becoming less realistic. Technological change, in particular modern communication technology, allows the extension of market work beyond the realm of firms into the household (teleworking). At the same time large segments of household work are outsourced to the market, in particular to the public sector. The type of labour which is being transferred is largely care-work – it ranges from childcare to care for the sick and disabled and the elderly, and food preparation, cleaning and ironing.

These transformations are an indication of the interaction of market and household work and their respective products as a source of consumption and investment. The market and household sector interact in complex ways. They are part of a system of communicating vessels. The mix changes over time as a result of technological, economic and social changes. Market actions are replete with externalities, public goods, transaction and enforcement costs, co-operative and collective behaviour such that mathematical solutions become intractable. Interdependent needs are at the root of normative solutions, which take the form of coordinated policies in the social sphere (social cohesion) in Europe[15], while at the same time pursuing policies which are to raise the productivity and competitiveness of the European Union (Lisbon agenda)[16]. The path dependence of traditional models of social organisation of the various countries implies different adjustment speeds of socio-economic to changing needs with consequences for economic growth as well as demographic change.

The Scandinavian model, which is based on individual rights and obligations, appears to be better able to cope with the current substantial socio-economic changes and the ageing problem – maximising the degree of social inclusion and economic integration and providing an equitable distribution of the social dividend – than the other models of socio-economic organisation in Europe.

The models of the Southern and Central European countries are increasingly unable to cope with the rising fluidity of family and employment relationships as well as the ageing of societies. Activity rates of older persons are lower than in any other model and the rising labour force participation of women jeopardises the role of the family as a major provider of social protection. The changing employment relationships exacerbate the problem. They result in a departure from standard gender-age-status transitions. People frequently move from school into work, then into training, re-training or further education, back into work with

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[15] *Archer* (1988) points out the failure of social sciences to reconcile culture and agency.

[16] The Lisbon agenda is a development plan of the European Union. It was set out by the Council of Europe in 2000 in Lisbon. More in the Official EU-Summary: http://europa.eu/scadplus/glossary/lisbon_strategy_en.htm, also *Rodrigues* (2003) for an analytical underpinning.

intermittent phases of unemployment. This makes economic dependence a recurring phenomenon in the working life cycle of a majority of individuals, often reversing the traditional roles of men and women and even of young and old in society. Thus the need for individual and targeted social protection systems in the area of labour and social policy (active labour market policies and social inclusion policies). The Netherlands, which share features of the Continental and Anglo-Saxon Model, have been successful in adapting their system of social organisation to the new needs, ensuring economic and employment growth without jeopardising social inclusion and fertility development (*Visser,* 1998, 2000, 2002, *Ferrani – Nelson,* 2002).

While the UK is successful at the economic growth front, it has problems of coping with poverty and socio-economic exclusion of particular groups of persons. It is addressing the problem of poverty of jobless parents by offering tax credits to working parents (Working Families' Tax Credit (WFTC), introduced in 1999, *Duncan,* 2002) together with generous additional support if they have to pay for child-care. This is to serve the dual purpose of increasing the incentive to work of low income families while at the same time promoting employment growth in child care services.

All that said, the breadwinner/individual dichotomy of the social security model as well as the division of responsibility for wellbeing between the state, the market and the household, will have to be reconsidered. The challenge of any reform lies in the details of the system's design.

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